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RAW SEQUENCE LISTING
PATENT APPLICATION US/09/504,393

DATE: 03/08/2000
TIME: 16:12:30

Input Set: I504393.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

1 <110> APPLICANT: BACHMANN, Heinrich
2 BRUGGER, Roland
3 FRIEDLEIN, Arno M
4 WIRTZ, Gabriele M
5 WOGGON, Wolf-Dietrich
6 WYSS, Adrian
7 WYSS, Markus
8 <120> TITLE OF INVENTION: BETA, BETA-CAROTENE 15,15'-DIOXYGENASES, NUCLEIC ACID
9 SEQUENCES CODING THEREFOR AND THEIR USE
10 <130> FILE REFERENCE: B, B-CAROTENE 15,15'-DIOXYGENASES, ...
11 <140> CURRENT APPLICATION NUMBER: US/09/504,393
12 <141> CURRENT FILING DATE: 2000-02-15
13 <150> EARLIER APPLICATION NUMBER: 103382.0
14 <151> EARLIER FILING DATE: 1999-02-22
15 <160> NUMBER OF SEQ ID NOS: 10
16 <170> SOFTWARE: PatentIn Ver. 2.1
17 <210> SEQ ID NO 1
18 <211> LENGTH: 526
19 <212> TYPE: PRT
20 <213> ORGANISM: CHICKEN
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24 Lys Ala Glu Val Gln Gly Gln Leu Pro Thr Trp Leu Gln Gly Val Leu
25 20 25 30
26 Leu Arg Asn Gly Pro Gly Met His Thr Ile Gly Asp Thr Lys Tyr Asn
27 35 40 45
28 His Trp Phe Asp Gly Leu Ala Leu Leu His Ser Phe Thr Phe Lys Asn
29 50 55 60
30 Gly Glu Val Tyr Tyr Arg Ser Lys Tyr Leu Arg Ser Asp Thr Tyr Asn
31 65 70 75 80
32 Cys Asn Ile Glu Ala Asn Arg Ile Val Val Ser Glu Phe Gly Thr Met
33 85 90 95
34 Ala Tyr Pro Asp Pro Cys Lys Asn Ile Phe Ala Lys Ala Phe Ser Tyr
35 100 105 110
36 Leu Ser His Thr Ile Pro Glu Phe Thr Asp Asn Cys Leu Ile Asn Ile
37 115 120 125
38 Met Lys Thr Gly Asp Asp Tyr Tyr Ala Thr Ser Glu Thr Asn Phe Ile
39 130 135 140
40 Arg Lys Ile Asp Pro Gln Thr Leu Glu Thr Leu Asp Lys Val Asp Tyr
41 145 150 155 160
42 Ser Lys Tyr Val Ala Val Asn Leu Ala Thr Ser His Pro His Tyr Asp
43 165 170 175
44 Ser Ala Gly Asn Ile Leu Asn Met Gly Thr Ser Ile Val Asp Lys Gly

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49          210          215          220
50  Pro Ser Arg Ser Leu Leu Gln Pro Ser Tyr Tyr His Ser Phe Gly Ile
51  225          230          235          240
52  Thr Glu Asn Tyr Ile Val Phe Ile Glu Gln Pro Phe Lys Leu Asp Ile
53          245          250          255
54  Val Lys Leu Ala Thr Ala Tyr Ile Arg Gly Val Asn Trp Ala Ser Cys
55          260          265          270
56  Leu Ser Phe His Lys Glu Asp Lys Thr Trp Phe His Phe Val Asp Arg
57          275          280          285
58  Lys Thr Lys Lys Glu Val Ser Thr Lys Phe Tyr Thr Asp Ala Leu Val
59          290          295          300
60  Leu Tyr His His Ile Asn Ala Tyr Glu Glu Asp Gly His Val Val Phe
61  305          310          315          320
62  Asp Ile Val Ala Tyr Arg Asp Asn Ser Leu Tyr Asp Met Phe Tyr Leu
63          325          330          335
64  Lys Lys Leu Asp Lys Asp Phe Glu Val Asn Asn Lys Leu Thr Ser Ile
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66  Pro Thr Cys Lys Arg Phe Val Val Pro Leu Gln Tyr Asp Lys Asp Ala
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68  Glu Val Gly Ser Asn Leu Val Lys Leu Pro Thr Ser Ala Thr Ala Val
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70  Lys Glu Lys Asp Gly Ser Ile Tyr Cys Gln Pro Glu Ile Leu Cys Glu
71  385          390          395          400
72  Gly Ile Glu Leu Pro Arg Val Asn Tyr Asp Tyr Asn Gly Lys Lys Tyr
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74  Lys Tyr Val Tyr Ala Thr Glu Val Gln Trp Ser Pro Val Pro Thr Lys
75          420          425          430
76  Ile Ala Lys Leu Asn Val Gln Thr Lys Glu Val Leu His Trp Gly Glu
77          435          440          445
78  Asp His Cys Trp Pro Ser Glu Pro Ile Phe Val Pro Ser Pro Asp Ala
79          450          455          460
80  Arg Glu Glu Asp Glu Gly Val Val Leu Thr Cys Val Val Val Ser Glu
81  465          470          475          480
82  Pro Asn Lys Ala Pro Phe Leu Leu Ile Leu Asp Ala Lys Thr Phe Lys
83          485          490          495
84  Glu Leu Gly Arg Ala Thr Val Asn Val Glu Met His Leu Asp Leu His
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86  Gly Met Phe Ile Pro Gln Asn Asp Leu Gly Ala Glu Thr Glu
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94  agctgttctt agcccagaga ggagggcacc gtacgcctgc aggagcagct gggtagagga 120

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97 ccagggatgc acacaatagg ggacactaaa tacaaccact ggtttgatgg cttgggtctg 300
98 ctgcacagct tcacgtttta aaatgggtgaa gtttactaca gaagtaagta cctccgaagt 360
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100 gcttatccgg atccatgcaa aaacatattt gccaaaggcat tctcatactt atctcacacc 480
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102 gctaccagtg agactaactt catcagaaaa attgatccac agactctgga gacactagat 600
103 aaggtagact acagcaaata thtagctgta aacttggcaa cttctcacc cactatgac 660
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106 cacctggaag tagtatgctc catcccttct cgctccctgc tccaaccaag ctactaccac 840
107 agctttggaa tcacagaaaa ttatattgtg ttcatagagc agccatttaa actggatatt 900
108 gtcaaaactg caactgccta catccgaggt gtgaactggg cttcctgcct ttcctttcat 960
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153 <211> LENGTH: 506
154 <212> TYPE: PRT
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160              20              25              30
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163 His Ser Phe Thr Phe Lys Asn Gly Glu Val Tyr Tyr Arg Ser Lys Tyr
164              50              55              60
165 Leu Arg Ser Asp Thr Tyr Asn Cys Asn Ile Glu Ala Asn Arg Ile Val
166      65              70              75              80
167 Val Ser Glu Phe Gly Thr Met Ala Tyr Pro Asp Pro Cys Lys Asn Ile
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170              100              105              110
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172              115              120              125
173 Thr Ser Glu Thr Asn Phe Ile Arg Lys Ile Asp Pro Gln Thr Leu Glu
174      130              135              140
175 Thr Leu Asp Lys Val Asp Tyr Ser Lys Tyr Val Ala Val Asn Leu Ala
176      145              150              155              160
177 Thr Ser His Pro His Tyr Asp Ser Ala Gly Asn Ile Leu Asn Met Gly
178              165              170              175
179 Thr Ser Ile Val Asp Lys Gly Arg Thr Lys Tyr Val Leu Phe Lys Ile
180              180              185              190
181 Pro Ser Ser Val Pro Glu Lys Glu Lys Lys Lys Ser Cys Phe Lys His
182              195              200              205
183 Leu Glu Val Val Cys Ser Ile Pro Ser Arg Ser Leu Leu Gln Pro Ser
184      210              215              220
185 Tyr Tyr His Ser Phe Gly Ile Thr Glu Asn Tyr Ile Val Phe Ile Glu
186      225              230              235              240
187 Gln Pro Phe Lys Leu Asp Ile Val Lys Leu Ala Thr Ala Tyr Ile Arg
188              245              250              255
189 Gly Val Asn Trp Ala Ser Cys Leu Ser Phe His Lys Glu Asp Lys Thr
190              260              265              270
191 Trp Phe His Phe Val Asp Arg Lys Thr Lys Lys Glu Val Ser Thr Lys
192              275              280              285
193 Phe Tyr Thr Asp Ala Leu Val Leu Tyr His His Ile Asn Ala Tyr Glu
194      290              295              300

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 DATE: 03/08/2000
 TIME: 16:12:30

Input Set: I504393.RAW

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195      Glu Asp Gly His Val Val Phe Asp Ile Val Ala Tyr Arg Asp Asn Ser
196      305                      310                      315                      320
197      Leu Tyr Asp Met Phe Tyr Leu Lys Lys Leu Asp Lys Asp Phe Glu Val
198                      325                      330                      335
199      Asn Asn Lys Leu Thr Ser Ile Pro Thr Cys Lys Arg Phe Val Val Pro
200                      340                      345                      350
201      Leu Gln Tyr Asp Lys Asp Ala Glu Val Gly Ser Asn Leu Val Lys Leu
202                      355                      360                      365
203      Pro Thr Ser Ala Thr Ala Val Lys Glu Lys Asp Gly Ser Ile Tyr Cys
204                      370                      375                      380
205      Gln Pro Glu Ile Leu Cys Glu Gly Ile Glu Leu Pro Arg Val Asn Tyr
206      385                      390                      395                      400
207      Asp Tyr Asn Gly Lys Lys Tyr Lys Tyr Val Tyr Ala Thr Glu Val Gln
208                      405                      410                      415
209      Trp Ser Pro Val Pro Thr Lys Ile Ala Lys Leu Asn Val Gln Thr Lys
210                      420                      425                      430
211      Glu Val Leu His Trp Gly Glu Asp His Cys Trp Pro Ser Glu Pro Ile
212                      435                      440                      445
213      Phe Val Pro Ser Pro Asp Ala Arg Glu Glu Asp Glu Gly Val Val Leu
214                      450                      455                      460
215      Thr Cys Val Val Val Ser Glu Pro Asn Lys Ala Pro Phe Leu Leu Ile
216      465                      470                      475                      480
217      Leu Asp Ala Lys Thr Phe Lys Glu Leu Gly Arg Ala Thr Val Asn Val
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229                      20                      25                      30
230      Phe Glu Val Gly Ser Glu Pro Phe Tyr His Leu Phe Asp Gly Gln Ala
231                      35                      40                      45
232      Leu Leu His Lys Phe Asp Phe Lys Glu Gly His Val Thr Tyr His Arg
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234      Arg Phe Ile Arg Thr Asp Ala Tyr Val Arg Ala Met Thr Glu Lys Arg
235      65                      70                      75                      80
236      Ile Val Ile Thr Glu Phe Gly Phe Thr Thr Cys Ala Phe Pro Asp Pro
237                      85                      90                      95
238      Cys Lys Asn Ile Phe Ser Arg Phe Phe Ser Tyr Phe Arg Gly Val Glu
239                      100                     105                     110
240      Val Thr Asp Asn Ala Leu Val Asn Val Tyr Pro Val Gly Glu Asp Tyr
241                      115                     120                     125
242      Tyr Ala Cys Thr Glu Thr Asn Phe Ile Thr Lys Ile Asn Pro Glu Thr
243      130                     135                     140
      Leu Glu Thr Ile Phe Thr Lys Gln Val Asp Leu Cys Asn Tyr Val Ser

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Input Set: I504393.RAW

Line ? Error/Warning

Original Text

320 W "N" or "Xaa" used: Feature required

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336 W "N" or "Xaa" used: Feature required

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